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CIBA SPECIALTY CHEMICALS CORPORATION
PATENT DEPARTMENT
540 WHITE PLAINS RD
P O BOX 2005
TARRYTOWN, NY 10591-9005

EXAMINER

SELLERS, ROBERT E

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1712

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 9

Application Number: 09/879,422
Filing Date: June 12, 2001
Appellants: HOFFMANN ET AL.

David R. Crichton
For Appellants

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 8, 2003.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The statement of the issues in the brief is correct.

(7) Grouping of Claims

The rejection of claims 21-23 and 26-30 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

4,446,086	Molenaar et al.	May, 1984
719,824	Europe (CIBA GEIGY AG)	July, 1996
1,358,637	Great Britain (Argus Chemical Corporation)	July, 1974
WO 94/29377	PCT (CIBA GEIGY AG)	December, 1994

(10) Ground of Rejection

The following ground of rejection is applicable to the appealed claims. The text of section 103 of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 21-23 and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molenaar et al. and European Patent No. 719,824 in view of Great Britain Patent No. 1,358,637 and PCT Publication No. WO 94/29377.

Molenaar et al. discloses dust-free particles (col. 3, lines 17-24) prepared by melt extrusion through a die plate 25 (col. 8, lines 4-24 and Figures 5 and 6) with openings 26 having a diameter of from about 0.5 to about 4.0 mm and pelletizing. The dust-free particles are derived from stabilizers, UV absorbers and epoxidized oils (col. 6, lines 56-57 and 64-66).

The European patent shows low-dust granules having a particle size distribution of from 1-10 mm in accordance with ISO 3435 and a loose bulk density of greater than 400 g/l (page 2, lines 35-38) produced by melt extruding at 150°C a phenol antioxidant (page 21, line 26; page 22, lines 23-25 and page 33, Example 3, pentaerythritol ester of β -(3,5-di-tert-butyl-4-hydroxyphenyl)propionic acid) through nozzles possessing a diameter of 2 mm and cutting the extrudate. The elected species of diethyl-3,5-di-tert-butyl-4-hydroxybenzylphosphonate is named (page 22, lines 17-18) and is present in an amount of preferably from 3-60% by weight (page 24, lines 55-57). "The granules can furthermore also contain additional substances (page 3, line 50)."

The claimed from 10-90% by weight of bisphenol A diglycidyl ether is not recited. The British patent teaches a stabilizer system comprising from 2.5-50 parts (page 21, lines 12-14) of an organic phosphite, a polyhydric phenol and from 2.5-50 parts of an epoxy compound (page 1, lines 36-38) such as a bisphenol A diglycidyl ether having an epoxy equivalent of from 55-700 (page 24, line 34, BIS E) which exhibits enhanced resistance to discoloration over the organic phosphite by itself (page 1, lines 40-42 and page 24, lines 4-14). The equivalency between the bisphenol A diglycidyl ether and the epoxidized oil of Molenaar et al. as the epoxy compound is established (page 10, lines 28-32; page 11, lines 9-11 and page 24, lines 32 and 34, ESO and BIS E). The stabilizer exemplified in the European patent is shown (page 24, line 27, PE 3,5).

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The PCT publication (page 26, Table 6, the second Comparison vs. Example 12) demonstrates a reduced melt flow rate (MFR) for a stabilizer blend containing an organic phosphite (the same species as that of the European patent, page 22, line 6, B-1) and 83.3% by weight of a bisphenol A diglycidyl ether (page 21, last line, A-3 wherein the amount is calculated from the ratio 1:1.2 in Table 6) as compared to a mixture without the polyepoxide.

It would have been obvious to incorporate the bisphenol A diglycidyl ether of the British and PCT patents as a stabilizer additive to the dust-free or low-dust granular formulations of Molenaar et al. and the European patent in order to improve the resistance to discoloration (British patent, page 24, lines 5-14) and to reduce the melt flow rate (PCT publication, page 26, Table 6).

(11) *Response to Arguments*

The epoxy compound of the British and PCT patents are not used for cross purposes or for dissimilar reasons. Both Molenaar et al. (col. 6, lines 65-68) and the European patent (page 3, lines 50-51) are open to the introduction of other additives ranging from the epoxidized oils of Molenaar et al. to the solid thermoplastic polymers of the PCT publication. The motivation for including the bisphenol A diglycidyl ether of the British and PCT patents is their teachings that the bisphenol A diglycidyl ether imparts enhanced resistance to discoloration and reduced melt flow rate to systems containing stabilizers. Such a motivation is not at cross purposes or dissimilar to the open inclusion of additives in Molenaar et al. and the European patent, but are desirable features for the dust-free or low-dust granules of the primary references.

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The further additives of Molenaar et al. and the PCT publication are not confined to only plasticizers. Both patents embrace additives in general of which the epoxidized oils of Molenaar et al. is but one example. The British patent recognizes that either epoxidized oils or bisphenol A diglycidyl ethers are suitable additives to stabilizer systems to diminish discoloration (page 10, lines 28-32; page 11, lines 9-11 and page 24, lines 32 and 34, ESO and BIS E). It would have been obvious to utilize the bisphenol A epoxy resin of the British and PCT patents as the additive of Molenaar et al. and European patent in order to impart resistance to discoloration and reduced melt flow rate.

The claims are directed to low-dust granules wherein one of the components is "b) 10-90% by weight of at least one bisphenol A diglycidyl ether (claim 21, line 6)." There is no requirement that the bisphenol A diglycidyl ether be used in solid form. The process of preparation of the low-dust granules defines the "bisphenol A diglycidyl ether which is solid at room temperature (claim 21, lines 10-11)." The claims require low-dust granules and not their process of preparation, thereby constituting a product-by-process.

"If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (In re Thorpe, 227 USPQ 964, 966, Federal Circuit 1985 and MPEP § 2113, the Product-by-Process Claims section)."

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“Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product (*In re Marosi*, 218 USPQ 289, 292, Federal Circuit 1983 and MPEP § 2113, the section entitled ‘Once a Product Appearing to be Substantially Identical is Found and a 35 U.S.C. 102/103 Rejection Made, the Burden Shifts to the Applicant to Show an Unobvious Difference’).”

The employment of the bisphenol A diglycidyl ether of the British and PCT publications as the additive of Molenaar et al. and the European patent in order to improve the resistance to discoloration and reduce the melt flow rate provides the rationale that the claimed low-dust granules are the same or similar to that of the prior art.

Since a rationale has been provided to show that the claimed product is obvious over that of the prior art, the burden shifts to appellants to establish an unobvious difference between the claimed and prior art low dust granules. None of the evidence of record presented in pages 65-74 of the specification addresses the criticality of the claimed solid bisphenol A diglycidyl ether only defined in the process of preparation of the low dust granule over the closest prior art epoxidized oils of Molenaar et al. Each of the examples employs solid bisphenol A diglycidyl ethers without a comparison with the epoxidized oils of Molenaar et al.

Even if the bisphenol A diglycidyl ether as a solid is given undue weight, the British patent (page 24, BIS E) and PCT Publication (page 22, lines 2-6, Stabilizers A-5 to A-8, bisphenol A diglycidyl ethers Araldit[®] GT 7203, GT 6071, GT 6099 and GT 6084) recite solid bisphenol A diglycidyl ethers as additives to stabilizer systems. The PCT publication even designates them as "stabilizers" themselves on page 21, line 23). The Araldit[®] species of the PCT publication are acknowledged as solids on page 52, lines 19-22, "b) solid bisphenol A diglycidyl ethers"). The "BIS E" diglycidyl ether of bisphenol A epoxy resin of the British patent

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possesses a high epoxy equivalent of from 550-700 which indicates a diglycidyl ether of bisphenol A advanced with bisphenol A to the extent that a solid form is attained.

Accordingly, the teachings of the bisphenol A diglycidyl ether of the British and PCT patents as a stabilizer additive to the stabilizer blends of Molenaar et al. and the European patent are pertinent whether or not the limitation of the bisphenol A diglycidyl ether as a solid is considered because the British and PCT patents both espouse it in solid form.

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,



Robert Sellers
Primary Examiner
Art Unit 1712

rs
May 20, 2003

Conferees



Robert Dawson



Vasu Jagannathan

CIBA SPECIALTY CHEMICALS CORPORATION
PATENT DEPARTMENT
540 WHITE PLAINS RD
P O BOX 2005
TARRYTOWN, NY 10591-9005